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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ARANI, TAGHI T

ART UNIT PAPER NUMBER

2131

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/718,220

Applicant(s)

PARK, JUNG JIN

Examiner

Taghi T. Arani

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/25/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-12 have been examined and are pending.

Information Disclosure Statement

2. An initialed and dated copy of Applicant's IDS form 1449 filed 2/25/2005 is attached to the instant Office action.

Response to Arguments

3. Applicant's arguments filed 12/6/2004 are fully considered but they are not persuasive.

Applicant argues that Snyder relates to analog communication techniques that do not utilize vocoders to convert the voice signal into digital data and that there is no mention of a vocoder having a bypass mode (page 8 of the Remarks).

Applicant further argues that both Snyder and Barron fail to disclose the elements of an operational mode processor for vocoding or bypassing a voice/data packet received from a radio channel interval, based on the operational mode control signal of the controller" (claim 1) or "vocoding a descrambled PCM signal or bypassing a descrambled packet based on an operational mode signal (claim 12).

As for the arguments relating to Snyder not utilizing vocoders to convert the voice signal into digital data. According to MPEP, the Examiner is obligated to give claim its broadest meaning in light of specification and declines to read the subject matter from the specification into the claim limitations. Vocoders to convert voice signal into digital data is not claimed and the combination of microprocessor 26 and inverter 18 (Figure 1) in Snyder perform the functionality of vocoding (vocoder) recited in claims 1-12.

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As for the arguments relating to use of PCM, the Examiner acknowledged in previous office action (page 4) that Snyder does not disclose the use of PCM and the secondary reference of Barron was used in a 103 type rejection to compensate Snyder's deficiencies as addressed in the previous office action.

As for the Applicant's arguments relating to "an operational mode processor for vocoding or bypassing....." (claim 1) and "vocoding a descrambled PCM signal or bypassing a descramble packet....." (claim 12), the previous office action (pages 4-5) expressly addressed the recited limitations.

Claim Rejections - 35 USC ' 103

The following is a quotation of 35 U.S.C. 103 (a) which forms the basis for all obviousness rejections set forth in this Office action: A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snyder et al, hereinafter Snyder (USP 5,278,907) in view of Barron et al, hereinafter Barron (USP 6,658,112).

As per claims 1 and 11, Snyder teaches a device for scrambling voice and data in the mobile communication system comprising:

a controller (col. 4, lines 48-50) for generating an operational mode control signal (col. 4, lines 50-53) to control an operational mode of the voice and data, a scrambling key feeding control signal (col. 4, lines 56-57) to control data scrambling, and a sync signal generation control signal (col. 4, lines 64-65);

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an operational mode processor for vocoding or bypassing a voice/data packet received from a radio channel interval, based on the operational mode control signal of the controller (col. 4, lines 50-53);

a random number generator for generating a random number based on the scrambling key feeding control signal of the controller (col. , 10, lines 29-30);

a sync signal transmitter for generating a sync signal based on the sync signal generation control signal of the controller, and sending the generated sync signal to a cable channel interval (col. 8, lines 27-35); and

a scrambler for scrambling a vocoded signal or a bypassed voice/data packet of the operational mode processor using the random number generated from the random number generator and, after complete transmission of the sync signal, sending the scrambled signal or voice/data packet to the cable channel interval (col. 5, lines 55-60).

Snyder is silent in disclosing that the scrambled signal is a PCM signal. Snyder does disclose that his invention can be utilized with a variety of scrambling techniques (col. 3, lines 50-54). Snyder also teaches that the scrambled signal can be transmitted by a number of known means use to transmit radio frequencies (col. 11, lines 45-50).

Barron teaches the method of scrambling and transmitting PCM signals (col. , 3, lines 13). PCM is another way in which the scrambled signal of Snyder could be transmitted.

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Barron within the system of Snyder because PCM is way to transmit digital data over an analog carrier. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

As per claims 5 and 12, Snyder teaches a device for descrambling voice and data in the mobile communication system comprising:

a sync signal detector for detecting a sync signal from an scrambled signal received from a cable channel interval (col. 5, line 17);

a controller for generating a descrambling control signal, an operational mode control signal, and a descrambling key feeding control signal, upon detection of the sync signal at the sync signal detector (col. 5, lines 19-20);

a random number generator for generating a random number based on the descrambling key feeding control signal of the controller (col. 10, lines 29-30);

a descrambler for descrambling the scrambled signal received from the cable channel interval using the random number generated from the random number generator, based on the descrambling control signal of the controller (col. 5, lines 2022); and

an operational mode processor for vocoding a descrambled signal of the descrambler into a packet or bypassing a voice/data packet, based on the operational mode control signal of the controller, and then sending the vocoded signal or the bypassed voice/data packet to a radio channel interval (col. 5, lines 55-60).

Snyder is silent in disclosing that the descrambled signal is a PCM signal. Snyder does disclose that his invention can be utilized with a variety of scrambling techniques (col. 3, lines 50-54). Snyder also teaches that the scrambled signal can be transmitted by a number of known means use to transmit radio frequencies (col. 11, lines 45-50).

Barron teaches the method of scrambling and transmitting PCM signals (col. 3, lines 1-3). PCM is another way in which the scrambled signal of Snyder could be transmitted.

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Barron within the system of Snyder because PCM is way to transmit digital data over an analog carrier. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

As per claim 9, Snyder teaches a device for scrambling/descrambling voice and data in the mobile communication system comprising:

an operational mode processor for vocoding or bypassing a voice/data packet received from a radio channel interval based on a received operational mode signal, and vocoding or bypassing a descrambled signal or packet based on the operational mode signal (col. 4, lines 50-53);

a random number generator for generating a random number based on a received scrambling and descrambling key feeding control signal (col. 10, lines 29-30);

a sync signal transmitter for generating a sync signal based on a received control signal, and sending the generated sync signal to a cable channel interval (col. 8, lines 27-35);

a scrambler for scrambling the vocoded signal or the bypassed voice/data packet of the operational mode processor using the random number generated from the random number generator and, after complete transmission of the sync signal, sending the scrambled signal or voice/data packet to the cable channel interval (col. 5, lines 5560);

a sync signal detector for detecting a sync signal from the scrambled signal received from the cable channel interval (col. 8, lines 27-35);

a descrambler for descrambling the scrambled signal received from the cable channel interval using the random number generated from the random number generator, based on a received descrambling control signal (col. 5, lines 20-22); and

a controller for generating the descrambling control signal to the descrambler, the scrambling and descrambling key feeding control signal, and the sync signal generation control signal, upon detection of the sync signal at the sync signal detector (col. 4, lines 48-65).

As per claims 2 and 6, Snyder teaches a switching block switched to the sync signal generator under the control of the controller to send the sync signal generated from the sync signal generator to the cable channel interval and, after complete transmission of the sync signal, switched to the scrambler according to the control signal of the controller to send the scrambled signal to the cable channel interval (col. 9, line 64-col. 10, line 4).

As per claims 3, 7 and 10, Snyder teaches a scrambling key feeder for feeding the stored scrambling key to the random number generator based on the control signal of the controller (col. 10, lines 29-31).

As per claims 4 and 8, Snyder teaches the random number generated from the random number generator includes positional information for scrambling the vocoded PCM signal or the bypassed voice/data packet of the operational mode processor (col. 5, line 67-col. 6, line 4).

Action is Final

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taghi T. Arani whose telephone number is (571) 272-3787. The examiner can normally be reached on 8:00-5:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Taghi T. Arani, Ph.D.
Examiner
Art Unit 2131

5/10/05



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